**Introduction to the Chemistry Lab**

***Objectives:*** *- To become familiar with some of the instrumentation within the lab*

* *To use our powers of observations and interpretations to begin to think like chemists*
* *To explore the steps within the scientific method*

***Background:***

*One of the most important tools a chemist (or chemistry student) has at their disposal is their senses. In this class we will use observations to make educated interpretations about what is going on within a reaction/experiment. These observations can come in the form of words, pictures, diagrams, charts, etc.*

*Throughout the year we will use the scientific method to help us answer objective questions from an experiment. The main steps of the SM are* ***making a hypothesis, testing a hypothesis(experiment), analyzing data, and communicating your results.***

*In this experiment we will be creating a double displacement reaction between Potassium Iodide [ KI ] and Lead (II) Nitrate [Pb(NO3)2]. When Potassium Iodide and Lead (II) Nitrate enter distilled water they* ***dissociate*** *into ions. The ions then recombine in different ways to create new products.*

**Pre-Lab Questions**

**1. What does the term dissociate mean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**2. If we were to place Potassium Iodide and Lead (II) Nitrate in the same pitri dish full of water, what is your hypothesis as to what will happen? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Procedure:**

1. Obtain **two** petri dishes and a **10ml** graduated cylinder.
2. Place 10ml of distilled water in each of the petri dishes. From this moment on do not move or shake the petri dishes.
3. Obtain the beakers of Potassium Iodide and Lead (II) Nitrate from the center of the lab table(*these need to be shared between all the groups at your table).*
4. Simultaneously place 6 drops of Potassium Iodide on one side of the petri dish and 6 drops of Lead (II) Nitrate on the other side. For the next 3-4 minutes write down your observations of the petri dish.
5. In the other petri dish place 6 drops of Potassium Iodide in one end. Now wait 3 minutes and then place 6 drops of Lead(II) Nitrate in the other end. For the next 3-4 minutes write down your observations of the petri dish.
6. Dispose of all solutions as instructed by Mr. Focht

**Observations:**

***Step 4***

***Step 5***

**Conclusions:**

1. How were the results for each petri dish different? Similar?

1a. What do you believe was the cause of the difference?

1. What interpretations about the behavior of ions can you make from this experiment?
2. In the margins of your paper label the location of the different step of the scientific method.